**Career Academy Integrated Unit Plan**

**Academy Name: Sports Science Academy** **School: Mainland High School**

**Date Created: June 6- June 9, 2011 Created by: Ashley Jackson, Elizabeth Grounds, Lorraine Lightner**

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| Integrated Unit Plan Title: The effects of weather on Athletics |
| Courses to integrate: Physical Science, |
| Grade Level: 10 |
| Timeline & Duration: 2-weeks |

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| **Unit Summary:** Students will be become aware of common ailments associated with weather amongst athletes and use their knowledge to develop protocol for treatment of those common injuries. |

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| **Overview of Activities/Lessons per Course** | | | |
| **Course** | **Physical Science** | **Adolescent Health Problems** | **Health Science II** |
| **Activity/Lesson** | Students will be taught the basic formation of weather patterns in the united states | Students will be taught safety precautions regarding severe weather during outdoor athletic activities. | Students will learn the physiological effects on the body that heat exhaustion, dehydration, Hyperthermia have on athletes. |
| **Activity/Lesson** | Students will be assigned a professional sports team. The students will be required to develop a policy and procedure involving safety for various weather scenarios affecting that sports team. | Students are assigned a specific weather situation and they have to come up with a brochure/ flyer informing athletes of the common dangers associated with the weather patterns | Create protocol for treatment various weather related effects on the human body |

**Lesson Instructions for Physical Science (course):**

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| **Standards (Performance Tasks or Course Frameworks or Sunshine State Standards ): SC.912.E.7.5; SC.912.E.7.6**  **Rigor & Relevance (quadrant):** |
| **Instructions to Teacher:** Teacher will provide a map of the united states and through various regional weather maps will show students how weather patterns move through the united states. Teacher will also have to pick the professional sports teams and regions she wants students to research. Preferably pick teams with outdoor arenas. The teacher will also need to make reservations in the media center to use computers. |
| **Instructions to Students:** Students will be required to gather information regarding weather patterns in the united states. They will be expected to design a flyer that contains policies and procedures on how a specific professional athletic teams should react during various weather scenarios |
| **Instructions for Student Accommodations:**   * Gathering newspapers from different regions that contain weather maps. * Take students to the media center to identify and look at weather patterns |
| **Assessment for Activity:** The project will be a summative assessment. The students will demonstrate their knowledge of weather patterns and interpreting weather maps through the completion of this project. Use the attached rubric for grading this assignment. If the teacher makes this a group project, all members of the group should complete an evaluation form on how much the students individually completed. |
| **Approximate Length of Time for Activity:**  1-2 weeks |
| **Materials Needed:**   * Individual newspapers with weather maps |
| **Resources Needed:**  Activity 1: Text book, PowerPoint presentation including weather pattern information, diagrams of different weather patterns for different regions of the country, guest speaker from local weather station.  Activity 2: List of professional sports teams from around the country, internet, media center, poster board, colored pencils, markers, art paper, glue, and writing utensils. |
| Attachments: |

**Lesson Instructions for Adolescent Health problems:**

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| **Standards (Performance Tasks or Course Frameworks or Sunshine State Standards ): PE.912.C.1.8**  **Rigor & Relevance (quadrant):** |
| **Instructions to Teacher:**  Teachers will educate students on different weather precautions associated with outdoor athletic activities including but not limited to: lightning, severe thunderstorms, extreme temperatures (both hot and cold) and affects of humidity. |
| **Instructions to Students:**  **Activity 1:** Students will create a weather notebook and discuss the possibilities of hazardous scenarios for outdoor athletic activities regarding weather.  **Activity 2:** Students will pick a given topic such as lightning, humidity, extreme temperatures, etc. and create a brochure/flyer outlining major concepts of their choice. They will gather various flyers and brochures from around the city to get ideas and inspiration. |
| **Instructions for Student Accommodations:** Teacher can pick up flyers or brochures to bring to class to use as examples. Diagrams and pictures can be supplied to the students for extra material**.** |
| **Assessment for Activity:** Students will be assessed on their weather notebook and on their final brochure/flyer. |
| **Approximate Length of Time for Activity:** 12 hours |
| **Materials Needed:** Spiral notebooks, colored pencils, markers, glue, writing utensils, art paper and computer printouts of pictures and or diagrams. |
| **Resources Needed:** Internet, local flyers, and text books. |
| Attachments: |

**Lesson Instructions for Health Science II**

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| **Standards (Performance Tasks or Course Frameworks or Sunshine State Standards ): PE.B.2.4.1; PE.A.1.4.3; PE.B.1.4.2**  **Rigor & Relevance (quadrant): A, B, C** |
| **Instructions to Teacher:**  Teacher will lecture on the regular physiological effects on the body that heat exhaustion, dehydration, Hyperthermia have on athletes. Teacher will also advise the students of the guidelines for proper hydration during exercise conditions and lead students as they research and create protocol for treatment of various weather related effects on the human body. |
| **Instructions to Students:**  Student will learn from lecture the importance of staying hydrated and protecting the body during various weather conditions. Students will apply their learning through research as they |
| **Instructions for Student Accommodations:**  Students will take notes during lecture and work in pairs to monitor fluid intake during exercise. |
| **Assessment for Activity:**  Students will create a hydration schedule for a given exercise scenario. |
| **Approximate Length of Time for Activity:**  4 classroom hours |
| **Materials Needed:**  Paper, writing utensils, fluids, exercise equipment |
| **Resources Needed:**  Textbooks, fluid replacement guidelines |
| Attachments: |